directed onto said surface plasmon resonance layer a phtotodetector array and[, a mirror] directed from said plasmon resonance detector to said [and a] photoedetector array; and

[a surface plasmon resonance layer in optic communication with the integrally formed surface plasmon resonance sensor;]

a flow cell [adapted for attachment] attached to the surface plasmon resonance layer, having a fluid path, an analyte detection chamber disposed along the fluid path and having an interior surface in fluidic communication with the surface plasmon resonance layer and having means[, and adapted] for generation of a molecular interaction bias across the chamber.

Amend claim 11 as follows:

11. (Amended) A sample delivery and sensing unit for directed molecular interaction during surface plasmon resonance analysis comprising:

an integrally formed surface plasmon resonance sensor having, in fixed functional geometric alignment thereto, a housing transparent to electromagnetic radiation of a given frequency range, a source of electromagnetic radiation having the given frequency range, a photodetector array disposed adjacent the surface of the housing and substantially coplanar with the source, such that radiation from the source reflects off the surface and strikes the photodetector array;

a thin surface plasmon resonance layer in optic communication with an exterior surface of the integrally formed surface plasmon resonance sensor; and

an analyte detection chamber in fluidic communication with the surface plasmon resonance layer[, adapted to generate] having means for generating a molecular

interaction bias across the analyte detection chamber to direct bias responsive conjugated molecules to the surface plasmon resonance layer.

Amend claim 14 as follows:

14. (Amended) A method for kinetically controlled surface plasmon resonance analysis comprising:

providing a surface plasmon resonance sensor having a surface plasmon layer in optical communication with the sensor;

derivatizing the surface plasmon layer;

placing an analyte detection chamber in fluidic communication with the derivatized surface plasmon layer;

providing means in[, wherein] the chamber [is adapted to generate] for generating a molecular interaction bias across the chamber;

providing a conjugate between an analyte and a bias responsive moiety, wherein the analyte is reactive with the derivatized surface plasmon layer and the bias responsive moiety changes the response of the analyte to the molecular interaction bias;

introducing the conjugated analyte into the chamber;

generating the molecular interaction bias within the chamber; and

determining changes in surface plasmon resonance due to association of the conjugated analyte to the derivatized surface plasmon layer.

Amend claim 17 as follows:

17. (Amended) A sample delivery and sensing apparatus [adapted] for performing the method of claim 15.

[Amend claim 18 as follows:]

18. (Amended) A sample delivery and sensing apparatus [adapted] for performing the method of claim 16.

[Amend claim 19 as follows:]

19. (Amended) The method of claim 14 wherein the conjugated analyte is [adapted] for the kinetically enhanced measurement of molecular interactions in the groups consisting of: avidin-biotin binding, antibody-antigen binding, antibody-antigen dissociation kinetics, protein binding, protein-nucleic acid binding, specific detection of small molecules, concentration of analytes, measurement of oligonucleotide complements, mixture proportions, receptor-ligand interactions, aptamer interactions, and molecular assembly events.

[Amend claim 20 as follows:]

20. (Amended) The method of claim 19 wherein the conjugated analyte is [adapted] for the kinetically enhanced measurement of molecular interactions in competitive binding assays.